

## TRANSPLANT NURSING ORAL-ADMINISTRATION

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### PERSPECTIVE OF BONE MARROW TRANSPLANT NURSES IN THE UNITED STATES (US) AND EUROPE (EU) OF UNMET EDUCATIONAL NEEDS

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Experienced oncology nurses working in the field of BMT are often faced with challenges of staying abreast on current nursing, medical and scientific advances. Targeted education programs are one way of addressing educational needs of nurses, thus improving patient care. A voluntary written survey was distributed to a sample of oncology nurses participating in a BMT expert panel meeting organized in EU (n = 10) and the US (n = 16). The purpose was to determine educational activities that address unmet needs of BMT nurses and their patients. This survey included baseline demographic information, mobilization strategies, and current tools available for patient education specific to the mobilization of stem cells. Additionally, nurses were asked to self-evaluate their knowledge of BMT nursing. Finally, open-ended questions explored nursing, patient, and family concerns across the transplant trajectory. Despite geographical location, nursing education and care of patients with multiple myeloma and lymphoma in the setting of autologous BMT are more similar than different. Findings indicate nurses desire additional education beyond what they are experiencing "on the job." For example, responses such as "gaining a better understanding of the rationale for transplantation", "why certain mobilization and preparative regimens are chosen", "autologous mobilization and collection issues", and "quality of life issues pertaining to each phase of their cancer treatment", not just BMT were common themes identified in this survey. Thus, this nursing survey validates our hypothesis that BMT nurses have unmet educational needs and that targeting these unmet needs is of paramount importance in the design of education programs. Although many educational resources exist, literature particular to stem cell biology is needed. Additionally, nurses desire basic and advanced information such as indications for BMT, hematologic and oncologic malignancies, mobilization and collection strategies, as well as patient care through the BMT trajectory. By providing education to nurses, they, in return, can better educate our patients, thus optimizing the benefits of the goals of BMT.

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### A LITTLE STRUCTURE GOES A LONG WAY: AN INNOVATIVE ORIENTATION PROGRAM FOR BMT NURSE COORDINATORS

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**Background and Purpose:** The orientation method for newly hired staff members into the role of Bone Marrow Transplant Coordinator had previously been poorly defined. Problems included: Inconsistency in preceptors' approach to orientation and reinforcing standard work protocols; failure to instruct new staff on documentation and teaching standards-a requirement of FACT (Foundation of Accreditation of Cellular Therapy); and failure of new staff to understand the BMT team approach.

#### Objectives:

- To have a standardized Orientation Program.
- To improve teamwork between BMT Coordinators and other health disciplines within a large medical center.

**Methods and Procedure:** A week by week orientation schedule with required topic review was created by the Lead Charge Coordinator. In addition, "shadowing" experiences, allowing new staff to be introduced to all departments involved in the BMT process, were scheduled. The weekly schedule included a summary of the documentation/teaching topics to discuss each week. Orienting new staff to a few required documents weekly gave preceptors

more time to stress the importance of each requirement and gave staff more time to acquire a stronger knowledge base as to why each requirement was necessary. The "shadowing" experiences allowed the new staff to see the impact of their role and how it fits with other roles in a way to enforce working in a seamless team. Coordinators are responsible to educate patients about what to expect from all BMT members. The Shadowing Experiences included:

- Financial Coordinator to learn the entire Insurance Process
- Search Coordinator/Intake Coordinator to learn the process of sibling and Unrelated Donor identification
- Data Management to learn the importance of Clinical Trials
- Pheresis Department for the actual collection of Peripheral Blood Stem Cells
- Cryopreservation Lab to identify how cells are processed
- Inpatient Units for the reinfusion of the transplants as well as the day to day care/discharge planning for the patients
- Cancer Center Charge Nurse to identify the volume of patients seen as well as typical treatments given
- Nurse Practitioners sessions for Disease Specific Lectures.

**Results:** New BMT coordinators have reported benefit from participating in observational experiences that offered insight into the overall purpose of the coordinator role and its relationship to interdepartmental teamwork. Patient safety and FACT maintenance are guaranteed if proper documentation and teaching is facilitated.

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### THE DEVELOPMENT OF A BMT-SPECIFIC ACUITY TOOL FOR THE OUTPATIENT TREATMENT CENTER

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Blood and marrow transplant (BMT) is a complex treatment modality. Transplant nurses provide care across the continuum of evaluation, treatment, recovery and end of life in multiple locations including inpatient units, outpatient clinics and outpatient infusion/treatment centers. Managers are challenged to determine appropriate staffing to ensure safe, effective and efficient nursing care. Tools to assess patient acuity can assist managers to meet this staffing challenge. Existing acuity tools do not accurately reflect the care of BMT patients. The care of the outpatient BMT patient is unique in its overlap between care provided in a general oncology outpatient infusion center (ex. Subcutaneous injections) as well as an inpatient unit (ex. 1:1 observation during stem cell infusion). Acuity and therefore, the staffing needs are unique in BMT outpatient treatment centers. An effective acuity tool reflects the complex and unique aspects of patient care and of the location where it will be used. Reliability and validity of an acuity tool must be determined prior to use. At Moffitt Cancer Center, an oncology inpatient acuity tool has been in use since 1994. In 2007, BMT Nursing Leadership recognized the need for a BMT-specific tool and the process of validation was initiated for inpatient and then, outpatient nursing care. Forty indicators of inpatient care were validated for the BMT Inpatient Acuity Tool and were the starting point for the BMT Treatment Center Acuity Tool. An ad hoc outpatient BMT acuity team was formed with the outpatient manager, clinical nurse specialist and experienced nurses from the treatment center. Following 4 rounds of review, a total of 39 indicators were identified and content validity was established at a significance of  $p > .05$ . At present, the ad hoc team is determining the appropriate level of nursing care and time required for each indicator. Next, the inter-rater reliability will be evaluated using weighted K statistics. The BMT Treatment Center Acuity Tool will provide daily information of patient acuity. It will assist staff and management to coordinate care delivery according to peak times of patient need and will serve as an objective tool to support appropriate staffing. Of significance is the involvement of both nursing leadership and staff in the formation of this tool. This collaborative effort has increased collegiality and teamwork among staff, managers and directors.